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CANADIAN HOME ECONOMICS ASSOCIATION

- Some Problems Of Assessing The Safety And Nutritional Value Of Canadian Foods
- Home Economics A Vital Force In The Life Of



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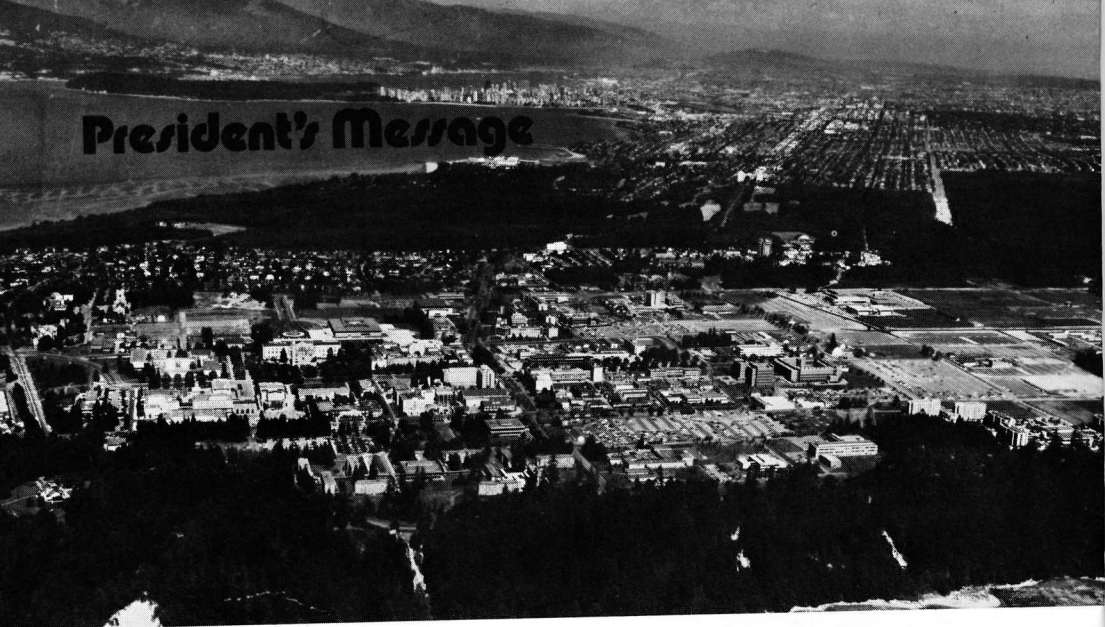
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President's Message



The above picture is an aerial view with The University of British Columbia in the foreground and Vancouver City in the background. The campus was the setting for the 1973 Board and Annual meetings which will have been completed by the time this Journal reaches you. During the sessions your executive was able to discuss with other members many of the issues that have been under consideration throughout the year and to be guided by their recommendations. Among other things progress of the Pre-Convention and Convention were reported on. Planning is well in hand for both of these upcoming events. How quickly the year has passed! Your executive has tried to encourage active participation from as many members as possible. Perhaps I could leave you with a thought that was put forth by the President of the American Home Economics Association, that "Each of us rededicate ourselves to fulfilling our commitment to greater individual involvement in the effort to enhance the quality of life for man through our profession and our Association. Commitment to involvement."

Happy holidays to you all.

Winifred J. Bracher

Winifred J. Bracher,
President.

HOME ECONOMICS- A Vital Force In The Life Of The Individual.

Presented by Dr. Edith C. Simpson, Former Dean, College of Home Economics, University of Saskatchewan, Canada
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Some members of the International Federation of Home Economics will be familiar, I hope, with F. F. Laidler's book "A Glossary of Terms used in Home Economics Education" which was first published in 1963, an important I.F.H.E. publication. In this book Miss Laidler states that "home economics" is an alternative name used for "home science" in New Zealand, "domestic science" in the United Kingdom and "household science" in Finland. In this paper I plan to call our subject "home economics". You will, in your thinking, use the term used in your own country. Whatever *name* we give to the discipline which brings us together in this twelfth Congress of the International Federation of Home Economics I shall try to define our purpose as home economists. I understand that a definition of our purpose as home economists is being studied by our Executive Committee.

May I suggest that we, as home economists, are dealing with study of individual human beings and their families and homes, in an attempt to help each person to satisfy his or her physical, social, aesthetic and emotional needs:

- physical needs for food, clothing and shelter.
- social needs for relationships with other human beings, socio-psychological matters and economic problems.
- aesthetic needs for pleasure gained through sight, sound, odor, flavor and feel.
- emotional needs for love and for spiritual experience.

The Preliminary Report for this the XIIth Congress of the International Federation for Home Economics states on page 115 that "...Home Economics . . omits nothing essential in matters related to everyday life where it concerns people and families in their *psychological, economic or practical* aspects". (psychological includes — culture, intellect, social, happiness; practical includes — food, clothing, shelter).

We who are educated in the Home Economics discipline are known as home economists and the group that I am addressing here today is made up of individuals representative of the whole world. Some of you are teachers from elementary or primary schools, secondary, technical colleges or high

schools, teacher training colleges, universities and continuing education (extension workers, county agents, home demonstration agents, special education). Have I mentioned all kinds of teachers of Home Economics? Many of you are administrators, supervisors, inspectors, directors, head mistresses, deans of colleges. Then there are home economists in business and industry: home service advisors, commercial demonstrators, advertising consultants, home economists in the mass media—T.V., radio and press. There are the dietitians, the nutritionists, the home economists in welfare work at home and abroad, the research workers, the students, the retired home economists and those who are full-time homemakers. Have I missed any of you? Home economists have so many different kinds of careers that it is confusing to home economists (ourselves) as well as to the public. Whatever your present professional pursuit we are all alike in that we have a similar background of education even though our various countries may have different ways of providing and recognizing education in Home Economics. Some countries have training colleges which grant certificates and diplomas and others educate their home economists at colleges and universities and confer on them a baccalaureate degree. In spite of these differences I suggest that we have a similar professional education and we have a common purpose. This purpose has been expressed in various ways. Two American authorities have expressed our purpose in terms that seem to me to be useful. Flossie M. Byrd, dean of a School of Home Economics in Texas expressed our purpose in this way:

Home Economics is the study of the human and material forces affecting home and families and the utilization of this knowledge for the benefit of mankind.¹

Anna M. Creekmore an associate professor in the College of Home Economics at Michigan State University writes that the purpose of Home Economics is to study man "as a total being, his near environment and the interaction between them".²

Watch for the definition which is part of the Declaration of the International Federation of Home Economics which is being worked on by a committee and presented to our International Permanent Council for use in our home countries.

May I repeat my own definition which I mentioned earlier? I believe that the purpose of Home Economics is to study human beings, their families and homes and to attempt to help each person to satisfy his or her physical, social, aesthetic and spiritual needs. It is my plan to use these three definitions as I present my thoughts to you to-day.

Approaching the Social, Aesthetic and Spiritual Needs Through the Physical Needs

In teaching Home Economics it is often our practice to approach people's social, aesthetic and spiritual needs through their physical needs.

To illustrate — we in the province of Saskatchewan, that part of Canada from which I come, approach the North American Indian women who live on

the Reservations, through helping them to cook more nutritious meals and to make clothes for their children "just like the clothes they can buy in the stores". In the Developing Countries the home economist usually begins in a similar way. Through her teaching she tries to make homes more functional, foods more nutritious and to encourage health care for everyone. Perhaps most Home Economics teachers spend much of their time helping people to satisfy their immediate needs for food, clothing and shelter. These are the physical needs, and if we stop at this level I suggest that we are not doing our whole job as home economists. We must keep in mind also the social, aesthetic and spiritual needs of our students, customers, patients and clients. You are doing this all the time, of course. Your cooking and nutrition lessons lead into person-to-person relationships through hospitality; clothing construction leads into a study of ethnic groups, or the social psychological significance of clothing, or the economic factors of fashion; shelter must be studied from the point of view of family and community needs; and child care includes them all. The teaching of management treats physical needs as a means of attaining all other needs. Family Planning takes into account harmoniously organized family life! Each one of these areas lends itself to a study of how to satisfy the social, aesthetic and spiritual needs of young people, old people and people of all ethnic groups.

We home economists have a colossal task if we attempt to do all things for all people and so most of us attempt to deal with only a few of the human and material forces affecting people and their homes. For this reason many home economists are specialists. We may be specialists in: clothing and textiles; food and nutrition; housing and design; equipment and consumer goods; human relations and management; child and youth development; education and communication. Some of us are specialists in only part of these specializations. Other home economists are generalists and as such attempt to cover food, clothing, shelter, child care and management but in less depth than does the specialist. Whether we are specialists or generalists we are all concerned about man as a total being and his interaction with his environment both at home and abroad.

My topic is "Home Economics a Vital Force in the life of the Individual". May I ask you whether "Home Economics is a Vital Force in Your Life"?

Do you agree with the statement that Home Economics is a study of man as a total being and his interaction with his environment? Because if you do, I believe that we are saying that Home Economics is a vital force in the life of the individual. Let us try out this thesis on the individual nearest and dearest to you — yourself!

Is Home Economics a vital force in you life? Does it control your behavior? You know a great deal about nutrition. Do you put that knowledge into practice or are you overweight? underweight? a food faddist? Do you put the principles of management into practice so that you have time to do the things you believe to be most important, the things that you enjoy doing,

leaving out the trivial things that take up so much time? Are your living arrangements such that they are a pleasure to you or are they "to impress your friends", or are they perhaps such that they eat up too much of your leisure time in an attempt to save money? As a home economist you have studied the principles of money management as well as time management! You have studied goals and values! Have these theories been put into practice so that they have become a vital force in your own life or are they still just theories? Aesthetic values for the home economist usually take the form of beauty in one's surroundings, home, furnishings, clothes, attractive table appointments and attractive food. Emotional values are expressed through love of one's family and friends, the religion of one's choice, devotion to one's students, clients, employees, colleagues, customers. We have plenty of scope for making Home Economics a vital force in our own lives and if we do this we have the key to happiness. Are you happy in being a home economist? If you are happy and if Home Economics is a vital force in your life you can probably make Home Economics a vital force in the lives of other individuals.

The next thought in my discussion is a question that concerns many of us — *Is our Identity as a Discipline Threatened?*

The preliminary report of the Twelfth Congress of the International Federation for Home Economics makes it quite clear that in many countries Home Economics needs to revise and adapt its programmes. Over and over again we find such suggestions as: "it is necessary to create an awareness of the contribution which Home Economics training can make", "in order to adapt this training. . . to everyday needs it would be necessary to reconsider the concept of Home Economics"; "it is necessary to develop the teaching of both sexes". The Report is full of requests for more Home Economics teaching; more research and a better understanding of what Home Economics includes and what is prepared to offer in the way of education and services. These questions demand that we ask whether our identity as a discipline is threatened. Concern over this question led to a significant study being made in the United States a few years ago. The study resulted in the publication in 1968 of "The Changing Mission of Home Economics" by E. J. McGrath and J. T. Jackson.³ This study urged that more attention, and more money be directed toward the field of Home Economics. Emphasis was placed on the need to change our "mission" or purpose. This demand for change appears repeatedly in the Preliminary Report for this the XIIth Congress of the International Federation of Home Economics. I hope that you have read this Preliminary Report which deals with "out-of-School Training in Home Economics" and that you are all looking forward with keen interest to the publication of the further study entrusted by UNESCO to I.F.H.E. on "the world position of Home Economics within formal education".

It is my belief that in Canada and the United States, Home Economics as a distinct discipline *is being threatened*. I do not know the conditions in other countries well enough to say what is happening elsewhere but the I.F.H.E. Preliminary Report leads me to believe that this is true for other countries as well as ours!

Why is this happening? Home Economics is being threatened as a distinct discipline because others are taking over much of what we should be doing, either because we are not doing it or because people do not know what we do! Educational authorities have become aware of the importance of the family as a social unit and the home as the place where the family is nourished. In much of the teaching of Home Economics only the physical needs are being served, with perhaps a meager treatment of social needs in the teaching of foods and child care and a similar meager treatment of aesthetic needs in clothing and housing. If we as Home Economics teachers are not prepared to deal with man, "as a total being, his near environment and the interaction between them," some other people will take over much of that which we could be doing and should be doing!

"Family Life Education" is a topic that is receiving a great deal of attention in many parts of the world. In some places it may mean Home Economics. But in many places "Family Life Education" is the name given to a new discipline. I suggest that much of the subject matter being included under this heading can well be included in our discipline. Recently I came on this definition of "Family Life Education": "... family life education covers ... preparation for marriage; the implications of and problems involved in being family members; the problems of childhood, adolescence, maturity and aging; the psychological and biological aspects of life; marital adjustment; and the personal, social, economic and spiritual responsibilities and duties of the individual and the family within the framework of society".⁴

Some people think of Family Life Education as sex education. Undoubtedly, sex education is included in the larger view of Family Life Education quoted above. Family planning is not mentioned in the comprehensive definition quoted above but in my opinion Family Life Education should include family planning.

Family Life Education, Sex Education, Family Planning, are these included in Home Economics? I believe they are. But they are important enough to be taught by other as well as by home economists — just as you and I teach language or math and yet we do not intend to become language teachers or mathematics teachers. Some home economists are unprepared to teach Family Life Education, Sex Education, Family Planning but other home economists are already teaching in these fields. Just as some of us are competent to teach about textiles and others about nutrition I suggest that many home economists are competent and must teach Family Life Education, Sex Education and Family Planning. These subjects will all be taught by others as well as by ourselves, nevertheless they must be part of the all-over concept of Home Economics if Home Economics is to be a Vital Force in the life of the Individual.

In some countries there are many other ways in which our identity as a discipline seems to be threatened: nutrition is taught in health education, family finance is taught in commercial courses, designing is taught in fine arts, food work is taught in food technology. The subject matter that logically

belongs in Home Economics is being taught by many other teachers. Are we losing these areas because home economists are blind to their responsibilities or is it because most home economists and their clientele are women and girls? Home Economics must find a way to be a vital force in the lives of boys and men as well as girls and women. Otherwise we are reaching only half of the people we should be serving. Our important subject matter must be taught to everyone and if we are not doing it others *must*.

Perhaps you work in a country where Home Economics has a secure and unchallenged place in education where it is important for girls and women to learn the fundamental skills of housekeeping. Even in such circumstances one must be alert to the needs of the boys as well as girls; to the needs of all students. If modern technology is introducing new textiles, foods, household equipment and home furnishings these innovations change the whole pattern of homemaking practices. Is the permissive sex behavior of today's society increasing the number of unmarried mothers? The Home Economics teacher may be the first to know that a girl or woman is pregnant because of the fitting problems in the sewing class. As a home economist, one is concerned for the "whole person" not just her sewing; and somehow we must help this girl or woman to solve her human problems as well as her clothing problems.

Let us not be fearful that our Discipline is Threatened! Let us do our best to carry out our responsibilities and encourage others to help us!

Now for my next point. — *The IHEA Report Reveals a Need for a More Aggressive Public Policy in Home Economics*

Our Preliminary Report deals with "Out-of-School Training in Home Economics" and as such emphasizes the need for "ongoing" education. Arrangements for the future should include, here I quote from the Report "more contacts with young people who marry and elderly people in new situations Content should keep up to the needs of different groups and focus *better* the situation of the consumer".

One of the specially significant statements in the Report is as follows, quote: "Home Economics is not always considered as part of the national economy, it is still a private sector of economy not taken into account". Could we interpret this to mean that matters which concern homes and families are not part of the national economy but rather that "home" affairs are a concern for the individual family? This interpretation is I hope false, but false or true, if governments behave as though it is true it is a serious matter. There is no easy cure for such a state of affairs but I would suggest: more boys and men in Home Economics classes, more home economists in public affairs especially on boards that make laws concerning housing, welfare and consumer goods, and on boards that influence industrial design and pollution. Home Economics is so concerned as a vital force in the life of the individual that we must concern ourselves with the body politic.

Finally — *It is the Adoption of Practices which makes Home Economics a Vital Force in the Life of the Individual*

The knowledge of theory is not enough for our purposes. I suggest that it is the adoption of the practices we teach that makes of Home Economics a vital force. The dietitian who is teaching a diabetic about what to eat has failed if her patient does not keep to his prescribed diet as interpreted by her. The food the diabetic eats is a vital force in keeping him alive and well. The Home Economics teacher urges those in her nutrition class to eat nutritious foods if they want to keep fit. Not all of our teaching has serious results if not adopted. We may teach the principles of kitchen planning and labor saving but never get these principles adopted. Perhaps some people enjoy cleaning up the mess they make more than they enjoy the effort to work in such a way that no mess is made! We home economists often become greatly frustrated when the practices we teach are not adopted. Sometimes we insist on "our" way of doing things when there are actually other acceptable ways of performing the same task; perhaps more enjoyable ways! If we attempt to get people to adopt our way of doing things we are attempting to influence people's lives. As teacher, dietitian, administrator, nutritionist, professor, research worker or other member of her profession it is the home economist's privilege and responsibility not only to teach the subject matter that is hers but often to make the subject matter play a vital role in the life of her student, patient, customer or client. The home economist may attempt to get her students to adopt good management practices. She may attempt to help people to dress more appropriately and to furnish their homes so that they will be more functional, livable and attractive. It is her hope that, as she develops in her students a better understanding of human relations the knowledge gained by them may lead to happier relationships between family members and so to happier lives.

In doing all of these things we are attempting to change people's lives! In other words we are attempting to make Home Economics a vital force in the lives of individuals!

If we agree that Home Economics can be a vital force in the lives of individuals then must we not be more careful about our subject matter, our theories and our recommendations; to make sure that they are sound? We must not go out to preach our dogma. We must attempt to develop in our students the ability to make decisions. This is much more important than the factual subject matter we teach.

I believe that the discipline known as Home Economics can be a vital force in the life of the individual. Such a belief leads me to urge fellow home economists to use their professional knowledge with the greatest discretion, always keeping in mind the right of individuals to make their own decisions.

I want to suggest in closing that happiness is everyone's most vital need. We home economists deal with the ingredients that should lead to happiness. We try to help people meet their physical, social, aesthetic and spiritual needs and there should be happiness in the fulfillment of each of these needs. To start with we must be happy ourselves, not grimly determined to make people over, but happily leading people whenever possible toward a more

satisfying way of life. That is why I was glad to be invited to address you on the theme "Home Economics—a vital force in the life of the individual."

If you agree with me that Home Economics can be a vital force in the life of the individual you will be anxious, as I am, to use your knowledge and influence to help people find satisfying values in their lives. In so doing we home economists can contribute in a most significant way toward helping to solve world problems. Many home economists are making significant contributions to the solving of world problems as well as personal problems, but our profession as a whole has not lived up to our potential. When each one of us is making Home Economics a vital force in the lives of individuals then we can be proud to be home economists. Each of us has a most significant job to do if we are to make Home Economics a truly vital force in the lives of individuals.

PLENARY SESSION B—XIITH CONGRESS OF THE INTERNATIONAL
FEDERATION OF HOME ECONOMICS — JULY 1972

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The top graduate in the College of Home Economics University of Saskatchewan and winner of the Rutter Prize is Ann-Marie John, of Saskatoon

Miss John, the outstanding graduate in home economics, receives her degree with great distinction. She majored in food science and completed an undergraduate thesis on the fortification of bread with pea protein concentrate.

SOME PROBLEMS OF ASSESSING THE SAFETY AND NUTRITIONAL VALUE OF CANADIAN FOODS.

A. B. Morrison, Ph.D.

Health Protection Branch, Ottawa.

Paper to the University of Toronto Household Science Alumnae. 70th Anniversary Symposium — November, 1972.

It is both appropriate and timely that the theme of this 70th Anniversary Symposium should be Food and Nutrition. The Faculty of Household Science at the University of Toronto has had a long and distinguished record of concern about foods and their nutritional value. Furthermore, both of these subjects are of great current interest to the public. It is perhaps also not inappropriate that you should have asked someone from the Health Protection Branch to participate in your Symposium, for we too have long been concerned about the nutritional value and safety of foods offered to Canadians. A recognition by the Federal Government of its responsibility in this important area goes back nearly a century in time. Although limited legislation to protect consumers against unsafe food was enforced prior to Confederation, the first great impetus to improve food control in Canada occurred in 1874. It arose as a result of widespread public indignation, not about unsafe foods, but about the evils of strong drink. In keeping with one of our national characteristics, a Committee of Parliament was appointed to study the problem and after rejecting the unthinkable possibility of prohibition

of *all* liquor, decided that it was not liquor itself but only *bad* liquor which ought to be banned. As a result of this commendable concern about the problems of bad liquor, an Act to control adulteration of liquor, foods and drugs became operative on January 1, 1875. It carried the imposing title of "An Act to Impose License Duties on Compounders of Spirits, to Amend the Act Respecting Inland Revenue and to Prevent Adulteration of Food, Drinks, and Drugs", but became known as the Inland Revenue Act of 1875. As many of you know, this was the first North American legislation on a national scale which related to food safety. Since then Canadian food legislation has evolved in scope and complexity as the industries involved have developed, as consumers have become better informed, and as scientific advances have provided a sound background for regulations. Today's Food and Drugs Act bears little outward resemblance to the Inland Revenue Act of 1875 but its relationships to its ancestor is both direct and clear. Both Acts reflect the wish of Parliament to protect the health of Canadians by safeguarding them against health hazards related to foods and other substances.

The current Food and Drugs Act was last fully revised in 1953 but has been amended in one way or another several times since then. The extensive Regulations to the Act are of course under almost constant amendment. The Act makes it a crime to commit certain specific acts or to omit to do them. It thus makes it an offence to do or not to do certain specific things related to foods. As a result the Food and Drugs Act is considered part of the Criminal Law within the clear authority of the Federal Government. Its provisions apply to all foods sold in Canada regardless of their point of origin or sale and regardless of whether they are involved in inter-provincial commerce. In like manner, imports and domestic foods are considered on an equal basis.

One of the fundamental principles which has guided the administration of Food and Drug Legislation in this country for nearly a century is that persons who manufacture, treat, process, label or advertise foods are responsible for the products they sell. It is *their* responsibility and *not* that of the Federal Government to ensure that these food products comply with the requirements of the Food and Drugs Act and Regulations. Food manufacturers recognize this fact and are more than willing to accept their responsibility to stand behind the quality of their products. Those who do so must recognize that they will get no official approval for compliance with the Law. In this (and I fear in many other aspects of life), virtue is its own reward and obedience to law is considered the duty and responsibility of all citizens. Thus the Federal Government does *not* guarantee the quality of foods sold in Canada. It is

obvious that the mere existence of Federal legislation, such as the Food and Drugs Act, does not guarantee that such legislation will be obeyed by all. One of the major tasks of Health Protection Branch therefore, is to ensure in so far as we are capable that the laws which we administer are not being violated.

The Health Protection Branch, is a newly organized major Branch of the Department of National Health and Welfare set up in order to permit an integrated global approach to the problems of chemicals in the environment and their impact on human health. The Branch contains those organizational elements which formerly were part of a number of Federal agencies in the Department, including the Food and Drug Directorate, the Environmental Health Directorate, the Communicable Disease Centre, the Epidemiology Service and the Nutrition Division. We have three basic responsibilities, which may be summarized as follows:

1. To protect the health of Canadians against a broad variety of environmental insults, including those associated with foods, drugs, cosmetics, medical devices, dangerous microorganisms, radiation, environmental chemicals, occupational and social environments.
2. To ensure that drugs and medical devices are effective when used for the purpose and in the manner indicated.
3. To protect Canadians against fraud related to drugs or medical devices.

To assist us in carrying out these responsibilities, we have adopted three basic tenets of management philosophy. They are as follows:

- A. To be the best health protection agency in the world. We obviously have a long way to go to reach this goal, but "a man's reach must exceed his grasp, or what's a heaven for", as Browning explained.
- B. To deal fairly, honestly and in good faith with the industries and professions we regulate or deal with. In doing so, of course, we indicate that we have no monopoly on integrity or ability.
- C. To reflect in our operations the bilingual and multi-cultural nature of Canada.

You will perhaps be interested in a brief overview of the organizational structure of Health Protection Branch. There are *seven* Directorates: *Foods, Drugs, Environmental Health, Laboratory Centre for Disease Control, Non-Medical Use of Drugs, Field Operations*, and *Administration*, supplemented by a central *Epidemiology Service* and a *Compliance and Evaluation Group*. Within the Food Directorate, there are three Bureaux, each with a distinctive role to play. The *Food Advisory Bureau* is responsible for evaluation of manufacturers' submissions respecting food additives, food packing materials and the like, for establishing tolerances for pesticide residues in foods and for providing a broad range of advice on the safety of foods, food chemicals and food components. The *Bureau of Nutrition* has been established to provide a central focus for nutrition within the Branch. It has responsibility for surveillance of the nutritional status of Canadians, the nutrient content of Canadian foods, dietary standards and nutrition education. *Food Research Laboratories* are the research arm of the Food Direc-

torate. They conduct extensive investigations in a broad variety of topics in the fields of food microbiology, nutrition, food toxicology, food composition, analytical methodology, detection of food adulteration and many others. The extent of our research efforts is illustrated by the fact that of the 176 research papers published by our staff last year, 73 were in the general field of food science.

Whether we like it or not, the work of the Branch is very much in the public eye. Many of us have had to become used to living in a veritable gold fish bowl of publicity. Hardly a day goes by without a story appearing in either the print or electronic media concerning our work. I believe this intense interest in what we are doing reflects a general concern by the public about the safety of the Nation's food supply, along with a growing sophistication and awareness on the part of many consumers of the scientific, social, ethical, and political issues at stake in this area.

It is unfortunate but true that our age and our society encourage the development of extremist viewpoints on many subjects. Under these circumstances it is sometimes difficult to tell the public the truth about food safety. One of the ironies of our time, is that science, which has done so much to transform man's physical world, seems increasingly to be the object of scorn and ridicule by many who do not understand its basic aims and philosophies. Murray Gell-Mann, the Nobel Prize winning physicist, has pointed out that "some of our most successful institutions are in trouble, under attack and even despised, sometimes by intellectuals and frequently by educated young people — in our

country in particular, science is in ill repute and that is not all, we are seeing among educated people a resurgence of superstition, extra-ordinary interest in astrology, palmistry and Valikovsky: there is a surge of rejection of rationality". The extent to which biased perspectives and emotional mysticism has penetrated the fabric of our national life is illustrated by the current resurgence in the magical and mystical properties attributed to certain foods by food faddists and by some of the more gloomy predictions of the apocalyptic school of environmentalists.

Tendencies within our society to reject rationality and objective appraisal of scientific data are hardly diminished by the irresponsible statements of some scientists and by popular articles of a sensational nature which attempt to create crises where non exist. Recent articles in the popular press, for example, have dealt with the supposed relationship between birth defects and the ingestion of blighted potatoes by women during pregnancy. The basis for this conjecture is a paper by Dr. J. R. Renwick, a British geneticist who pointed out some parallelism between fluctuations in the incidence of anencephaly and spina bifida and the varying incidence of potato blight. Dr. Renwick suggested that a substance *might* be produced in tubers affected by blight during storage so that women using defective potatoes in the Spring *might* give birth to malformed children during the following winter. We have had Dr. Renwick's contentions very carefully reviewed, not only by our own scientists but by an expert advisor from one of the leading Canadian universities. We have also been

in close touch with other scientists around the world who are intimately concerned with protection of the public against environmental teratogens. It is the unanimous conclusion of our own advisors and those we have contacted from outside the Health Protection Branch that the epidemiological picture is not as clear as Dr. Renwick postulates. We are however, vigorously pursuing laboratory experiments designed to test the validity of the hypothesis and carrying out epidemiological studies to confirm or refute Renwick's claim.

Despite the fact that Renwick's hypothesis is not proven, I have had a steady barrage of calls from newspapers, radio and television stations during the last week asking for comments on the purported relationship between potato blight and birth defects. In every instance it has been put to me that the relationship is unequivocally established, and in some instance I have been chastised for not taking immediate action to "do something about it". The fact that *no* relationship has been established and that at best an hypothesis has been suggested does not seem to have been appreciated by many. This sort of irresponsible reporting has, I believe, caused unwarranted concern amongst the populace. Scientists themselves must take the lead in presenting their findings to the public in a sensible and responsible way. They must not yield to the seduction of public acclaim. Failure to do so will ultimately result in widespread rejection by the public of the truths of science and their replacement by the mysticism and magic of more primitive societies and Darker Ages.

I would not wish to think that all reporting of food safety matters is

irresponsible or sensational in nature. There are a number of reporters in this country who consciously attempt to portray the truth about food safety and the nutritional value of Canadian foods. Let me draw from some of their stories as well as some of a more sensational nature which have appeared within the last few weeks to indicate to you the broad variety of our interest and activities in the area of foods and nutrition. A recent headline in the Ottawa Citizen, quoting Dr. James F. Richards, of the University of British Columbia, proclaimed "Health food no better than others". I personally was pleased to read that Dr. Richards had put the problem of health foods into better perspective by pointing out that so-called health foods are neither safer nor more nutritious than any other food. In agreement with Dr. Richards, I have no quarrel with those who wish for their own purposes to enjoy health foods. Many health foods which I have eaten are both nutritious and tasty. I deplore however, the extravagant claims which sometimes are made for the nutritional value of so-called health foods. There is no evidence that health foods as a group are more nutritious than comparable conventional foods. Furthermore, there is no evidence that health foods are any more safe than ordinary foods. From the available data which we have, for example, I am not persuaded that the conditions under which health foods are manufactured are more sanitary than those employed in the production of conventional foods. As a result, problems of foreign matter contamination and microbiological quality are at least as acute in the health food industry as in the conventional food industry.

Perhaps what I deplore most about health foods is not the foods themselves, but the tendency among some who purvey them to portray these substances as something magical. Recently, for example, we learned of a woman with a very serious vaginal infection who had been told by a health food dealer to treat the condition by eating large amounts of raw liver each day. It was only after several months, when the infection failed to respond to this bizarre treatment that the woman finally sought reputable medical assistance. By this time the infection had become well established and difficult to eradicate. Irresponsible promotion of this sort clearly is not in the public interest. It feeds upon ignorance; it is nurtured by an obstinant belief that since everyone eats foods, everyone is an expert about them.

There has been considerable interest in the press recently regarding the possible hazard to public health associated with the formation of nitrosamines in food products. Nitrosamines are readily formed from the reaction between nitrous acid (arising from nitrites) and secondary or tertiary amines. This reaction may occur in foods or in gastric juices *in vitro*. Small amounts of nitrosamines, usually as dimethyl nitrosamine, have been reported to be present in fish meal, flour, smoked fish, meat products, soybean oil, mushrooms, cheese, tobacco condensate, and alcoholic drinks. Only some of these observations have been confirmed by adequate analytical techniques. Our own Food Research Laboratories have been very active in this area. We have confirmed the occurrence of dimethylnitrosamine in sausage and salami at concentrations

of ten to eighty parts per billion, have found traces of another nitrosamine-nitrosopyrrolidine-in cooked but not in raw bacon samples. We have also found DMN at concentrations of up to 450 parts per billion in fish meal used for mink feeds. No nitrosamines have been detected by us in alcoholic drinks sold in Canada nor in mushrooms, cheeses, wheat flour or soybean oil. Our analytical techniques — GLC supplemented by mass spectrometry — are extremely sensitive, making it possible for us to detect concentrations of nitrosamines as low as 2 to 10 parts per billion.

Nitrosamines are extremely potent carcinogens, active against at least eleven species including monkeys, rats, mice, hamsters and guinea pigs. We must assume they also are human carcinogens. We have found that diethylnitrosamine can be formed from diethylamine and sodium nitrite in the gastric juices of human, rats, cats, dogs, rabbits and guinea pigs. Experiments are in progress to determine the carcinogenic potential of guinea pigs of diets containing diethylamine and sodium nitrite to determine whether this reaction also takes place *in vivo*. After 29 months, none of the animals given high doses of diethylamine and sodium nitrite have developed liver tumors, whereas 19 of 20 guinea pigs fed preformed diethylnitrosamine developed hepatic malignancies.

Sufficient data are not available to ascertain the "no effect" level of nitrosamines in experimental animals and the results of studies to answer this question will not be available for probably another year and a half. Until such information is forthcoming it will not be possible to set rational guidelines for nitrosamines in foods.

Because nitrosamines arise from the

reaction between nitrite and amines, attention naturally has been placed on the significance of nitrite levels in foods. Nitrites have been used for many centuries in the curing and preservation of meat products. The colour, flavour and texture of popular cured meats such as ham, bacon, and a variety of sausages including the common frankfurter, depend upon the use of nitrites. Nitrites serve a particularly useful preservative function by inhibiting the development of botulinum toxin in semi-perishable products such as smoked meats and pasteurized canned ham. The same effects cannot be produced by any other known safe substance. The level of nitrites which may be added to Canadian foods is carefully controlled under the Food and Drugs Regulations, which permit up to two hundred parts per million of nitrite as sodium nitrite in preserved meats. Analysis of nearly two hundred samples of meat products in our laboratories has shown an average concentration of twenty eight parts per million of sodium nitrite.

In considering what to do about nitrite levels in foods, we must attempt to balance the potential risk of the possibility of cancer induction from nitrosamines against the hazard to the consumer from the presence of botulinum toxin in certain preserved meat products which would result if nitrites were not used at all. It follows, therefore, that it is essential to determine the minimum level of nitrite needed to assure that botulinum toxin will not be formed in such products. Studies aimed at answering this question are under way in our own and other laboratories. Preserved meats prepared with various levels of nitrite added have been inoculated with

various amounts of botulinum spores and incubated at various temperatures for several days. Analyses are being conducted of nitrite levels after incubation and to determine whether botulinum toxin is produced. These studies along with others under way in various laboratories should enable us to make rational decisions regarding the valid place of nitrites in the food industry.

In August of this year, the Federal Ministers of National Health and Welfare and of Agriculture announced jointly that effective January 1, 1973, the Government is suspending use of diethylstilbestrol as a growth promotant in livestock production, pending acquisition of additional experimental evidence that it is safe. The suspension will apply to use of DES both as a feed additive and as an implant. This decision was based on the recommendations of an expert advisory committee of non-governmental medical experts convened to provide us with advice on the effects of DES on human health. The committee unanimously concluded that while there is no evidence DES has harmed the health of Canadians, there is a potential for harm from the use of the drug. The committee considered that if the use of DES were to be continued additional experimental data bearing on its safety should be developed.

The committee's conclusions were based on the following facts. DES is known to produce cancer in several animal species and there is strong presumptive evidence that it also is carcinogenic in man. As little as one microgram per kilogram body weight per day will produce mammary cancer when given to mice. This level of intake is approximately fifty times

greater than that which we can assume could result from ingestion by people of beef containing less than two parts per billion of DES. Two ppb is the limit of sensitivity of existing analytical methods for DES.

In 1971, Herbst *et al* in the U.S. presented presumptive evidence of the link between DES therapy in women during pregnancy and the occurrence of cancer of the vagina in their daughters some fourteen to twenty-two years later. The doses administered were much higher than those which could be obtained from meats, but the significance of the observation may lie chiefly in the fact that it demonstrates DES is a carcinogen for man. There is also a suggestion from the work of Ferrando, a French investigator, that DES in meat may be more toxic than the pure crystalline substance itself. Although the significance of this observation is not entirely clear, it is possible that concentrations of DES too low to detect chemically may exert deleterious biological effects. If this is so, the risk to human from small residues of DES in meats might be greater than originally thought.

As part of our continued program of monitoring for potentially harmful substances in foods, we have examined six hundred and ninety samples of beef liver for DES residues. Of that amount four (0.6%) were found to contain measurable amount of DES. In the U.S. a much higher percentage of positive beef livers has been found in the U.S. Department of Agriculture's DES Monitoring Program. Despite the fact that use of DES as a growth promotant in livestock production will be suspended in a few weeks time, we are continuing our monitoring program to

make certain that the law is complied with.

As some of you may know, there has been increased use of large doses of DES for contraceptive purposes as a so-called "morning-after pill". A number of people have asked why we take no objection to physicians prescribing DES for this purpose when we object to its possible occurrence in very small amounts in some samples of beef liver. First of all, it is not our purpose to interfere with the freedom of a physician to prescribe legal drugs to his patients as he sees fit. It is of course obvious that the possible hazards associated with DES as a contraceptive agent cannot be equated with those associated with its occurrence in meat samples. When DES is used as a contraceptive agent, there is in the great majority of instances no child involved, and fears that the drug may result in production of delayed defects in the female offspring must therefore be diminished, if not eliminated. In order to protect women who may be pregnant, we require manufacturers to include a warning in their product brochures to the effect that DES should not be given to pregnant women. Problems of the use of DES as a "morning-after pill" are being considered by our Advisory Committee on Oral Contraceptives. It is the view of many medical experts that women who are given DES as a morning-after pill who become pregnant despite use of the drug as a contraceptive, should consider abortion as a means of terminating the pregnancy involved. This is a problem which clearly lies within the practice of medicine, outside our jurisdiction.

Let me turn now very briefly to the problem of nutritional value of Cana-

dian foods and the nutritional status of Canadians. As you know, we have had under way for over two years a massive national nutrition survey. This survey which is amongst the largest and we think is the best conducted in the world, has involved collection of nutritional and dietary information on over twenty thousand people. The field portion of this study is now completed and we are collating and analyzing the great mass of data produced. The extent of the survey is best exemplified by the fact that some fourteen hundred pieces of information are available on each of the more than twenty thousand subjects who took part in it. Thus, we are involved with analysis of over twenty eight million bits of information. This is a massive task and I do not expect the results of the survey to be available for evaluation by our own staff and our expert advisory committees, until the end of the first quarter of 1973. The data provided by the Nutrition Canada Survey will provide us with a sound basis on which to judge the nutritional adequacy of Canadian diets, the nutritional status of Canadians, policies respecting nutrition education, food enrichment programs, and other remedial action if such is required.

Despite the aura of glamor which surrounds chemical contaminants in foods, such as pesticides and heavy metals, it is important to keep firmly in mind the fact that microbiological contamination is a far more common cause of unsafe food. It is estimated that at least two hundred thousand cases of food-borne illness of microbial origin occurs in Canada each year. Relatively few are reported to medical authorities, but the total loss, both in human and financial terms, resulting

from microbiological contamination of foods is very large indeed. A broad variety of organisms are involved. Permit me to focus for a moment on a relative newcomer to the ranks of microorganisms associated with food poisoning in North America. The "bug" in question is *vibrio parahemolyticus*, a pathogenic halophile which is the most common cause of food poisoning in Japan during the summer months. Our scientists have isolated *parahemolyticus* from uncooked samples of Canadian Atlantic shellfish including clams, oysters, periwinkles, mussels and snails. The organism is killed by normal household cooking procedures used in the preparation of fish; food poisoning associated with it thus can only result from eating contaminated raw or partially cooked seafood such as raw oysters. No cases of food poisoning from *V. parahemolyticus* have been reported in Canada, but we suspect it to have been the causative agent in certain undiagnosed outbreaks of gastroenteritis in the past. A large inoculum (10^6 to 10^9 cells) of *parahemolyticus* must be ingested to cause clinical disease. Adequate refrigeration prevents the growth of the microorganism in seafood, but it grows at 10-12°C (50-53°F). Poorly adjusted refrigerators and the top layer of containers in open food display cases may reach such temperatures. Our research on this interesting microorganism is continuing to determine the role which it plays in food-borne illness in Canada.

I have not had the opportunity in this brief discussion to even mention some of the other problems relating to food safety with which we are currently concerned. Instead of men-

tioning blighted potatoes, nitrosamines and diethylstilbestrol, I might have spent my time on saccharine, phthalates, heavy metals such as lead, cadmium and mercury, edible vegetable oils, food colours, such as amaranth or benzyl violet 4B, ethylenethiourea, asbestos, pesticides or salmonellosis. I hope however, that what I have had to say illustrates some of the complex issues with which we deal on a daily basis. It is an ineluctable fact that we often have to make scientific judgements on the basis of inadequate data. We often have to make predictions as to the safety of a compound in man based on animal data rather than on objective evidence obtained in man himself. We are constantly required to judge the applicability to man of data obtained by giving a *large* amount of chemicals to animals. Often the safety factor which we should apply in extrapolating from animal to man is not known with certainty. The safety of compounds which may have been in use for many years, sometimes is called into question when the compound is subjected to intensive investigation using the powerful techniques and tools of modern science. Finally, differences in response to a chemical observed in various experimental studies conducted in laboratories around the world are not uncommon, and introduce an additional element of complexity and uncertainty into the scientific decision-making process.

The responsibility for assessing the safety of the nation's food supply is extremely complex. It grows ever more complex each day as the advances of science unlock more of the secrets of nature.

Welcome New Members

NEW MEMBERS APRIL 1973

BRITISH COLUMBIA

Dr. Margaret E. Arcus, School of Home Economics, University of British Columbia, Vancouver 8, B.C.—Assistant Professor

Mrs. Peneolpe Charlesworth, 8825 Delvista Drive, Delta — Homemaker

ONTARIO

Miss Anne Hall, Union Gas Ltd., 48 — 5th St., Chatham — Home Service Representative

Miss Janice A. Reaburn, 2161 Ghent Ave., Apt. 1, Burlington — Home Economist Family Service Agency

QUEBEC

Miss Margaret Saunders, Best Foods, Canada Starch Co., 1 Place du Commerce, Montreal — Director Consumer Service Department

NEW BRUNSWICK

Mrs. Carol Goodman, Dept. Education, 736 King St., Fredericton — Home Economics Education Representative

1973 GRADUATES

BRITISH COLUMBIA

Mrs. Donella P. Thompson, Box 186, Harrison

SASKATCHEWAN

Miss R. Kathryn Driol, 904 — 9th Ave. North, Saskatoon S7K 2Z4

MANITOBA

Miss Lynda L. Clark, 321 Traverse Ave., Winnipeg R2H 2M7

Miss Janet S. Gordon, 6 Brereton Rd., Winnipeg R2J 2T8

Miss Judith A. Solvason, 948 Clifton St., Winnipeg R3G 2Y3

ONTARIO

Miss Fern B. Bast, R. R. 3 Wellesley N0B 2T0

Mrs. Reta Jean Beard, 16 Wilson View Ave., Apt. 401, Guelph N1G 1V4

Miss Susan D. Ellis, 1505 Church St., Windsor N8X 1V4

Miss Denise Glendenning, Apt. 709, 695 Talbot St., London N6A 2T8

Miss Susan E. Kidd, 368 Renforth Drive, Etobicoke M9C 2L9

Miss Patricia A. Kulyski, 701 Jane St., Toronto M6N 4A6

Ms. Nancy J. Lowen, 312 East 22nd St., Hamilton L8V 2W1

Miss Ann E. MacKenzie, 573 Maplehill Drive, Burlington

Miss Heather A. McCauley, 4 Murray St., Apt. 4A, Brampton

Miss Janice M. McCullough, 43 Old Coach Rd., St. Catharines L2N 2D6

Miss Lori B. Nelson, 190 Cosburn Ave., Apt. 604, Toronto M4J 2M1

Miss Faye E. A. Norsworthy, 389 Wilson St., Ancaster

Miss Margaret T. Proracki, R. R. 4, Waterford N0E 1Y0

Miss Karen E. Ross, 170 Ripplewood Cres., Kitchener N2M 4R8

Miss Angelina Tedesco, 7131 Roger Cres., Niagara Falls

Miss M. Teresa Zalewa, R. R. 4, St. Catharines

QUEBEC

Mme Gaétanne Brochu Gosselin, 1500 Rue Latour, St. Hubert, Co. Taillon

NOVA SCOTIA

Miss Suzanne E. Lamond, 183 Shore Road, Sydney Mines

Miss Donna J. Lynds, 259 Glenwood Drive, Truro

Miss Valerie E. Sullivan, R. R. 2, Weymouth, Digby Co.

PRINCE EDWARD ISLAND

Miss Earlene F. MacKinnon, R. R. 2 Tyne Valley, Springhill

Who's Who

MRS. HELEN MOSESON SAMUEL

After many years of service to Home Economics in the province of Alberta, Mrs. Helen Moseson Samuel is retiring from her position as Associate Professor of Clothing and Textiles at the University of Alberta. Helen attended the Olds School of Agriculture, the University of Alberta from which she received a B.H.Ec. and a diploma from the College of Education, and Michigan State University from which she graduated with a Master of Arts.

Mrs. Samuel was high school principal in Ferintosh, Alberta. As a member of the staff at the Olds School of Agriculture, she taught a variety of courses including Foods, Clothing, Crafts and Home Management. Following a year in Sweden spent visiting schools and studying design and drafting of patterns and Fashion Sketching, she was appointed Clothing Specialist for the Alberta Department of Agriculture. Prior to joining the staff at the University of Alberta she taught high school in Lacombe. As a member of the School of Household Economics she made a distinct contribution to the growth of the school and to the esta-

blishment and development of the Clothing and Textiles Division of which she has been acting Chairman for some time.

In professional organizations, Helen has held the positions of membership chairman for the Alberta Home Economics Association, College Clubs chairman for the Canadian Home Economics Association, and Alberta representative to the International Federation of Home Economics.

Mrs. Samuel is a true craftsman and an exceptionally inspiring teacher with high standards and a very keen and genuine interest in her students. She is highly respected by everyone who has been privileged in having her as a teacher and by those who have worked along with her.

As a tribute for her years of service, the staff of the School of Home Economics, in conjunction with the Edmonton Home Economics Association have initiated the Helen Moseson Samuel Prize to be awarded to a deserving student in Clothing and Textiles. Any donations to this fund may be directed to the Student Awards Office, University of Alberta.

The 1974 Canadian Home Economics Association Pre-Conference will be held in Vancouver, B. C., July 3, 4, and 5th. The theme for the 1974 Pre-Conference is The Family. Further announcements concerning programme and registration will be made in subsequent issues of the Journal.

HOME ECONOMICS IN PUBLIC LIFE

Dorothy Batcheller MacKinnon reports that home economists are contributing to their community of Belleville Ontario in no small way.

The mayor is Mrs. Roy Jaffrey (Robin) B.H.Sc., Toronto (MacDonald Institute).

The Transit Commission Chairman for the past 4 years is Mrs. Ross Burt (Marylea) B.Sc.H.Ec., McGill.

A Hastings County Board of Education Trustee for several years is Mrs. Ralph Graham (Miriam) B.A., Toronto (V.C.).

The immediate past chairman of the Parking Authority is Mrs. E. A. Manderville (Kay) B.Sc., Mt. Allison, B. Ed., Sackville.

Others are active in various organizations as members of boards of Directors or on executives, etc.

What are home economists doing in other communities?

ANNUAL CONFERENCE — SASKATCHEWAN HOME ECONOMICS ASSOCIATION

The Annual Conference of the Saskatchewan Home Economics Asso-

ciation was held on Saturday April 14, 1973 at the Regina Campus, University of Saskatchewan. One hundred and thirty home economists from all areas of the Province, heard Dr. Helen C. Abell, Dean of the College of Home Economics Saskatoon, challenge home economists to become aware of the public's expectations of the Profession. Speaking on the theme "What's To Be In '73", Dr. Abell stressed that the needs of the lower socio-economic groups are not being met, during this period of rapid change.

Professor Marjorie Guilford of Saskatoon, spoke of mandatory fibre content labelling, and optional care labelling of fabrics.

Dr. J. C. Chatwin of Regina, indicated Saskatchewan is in the forefront in the field of medicine, and presented methods used by the medical profession to keep their membership well informed.

Mr. Gordon R. Arnott gave a stimulating visual presentation of some newer concepts in Architecture and City Planning.

At a business session preceding the speakers, the following resolutions were presented and approved by the membership:

- (1) That the Saskatchewan Home Economics Association strongly recommend that the Saskatchewan Department of Agriculture appoint to its staff at least six home economists, one to be located in each of the six regional areas of

the Extension program of the Department of Agriculture.

- (2) That the Saskatchewan Home Economics Association urge the Government of Saskatchewan to delay proceedings to permit full and democratic discussion of proposed changes in the University Act.
- (3) Be it resolved that the present tax exemption for a dependent child be eliminated in favour of increasing the universal family allowance, which should be included in taxable income to facilitate its recovery from higher income families.

Executive members elected for a two year term were:

Miss I. Bailey, Regina —
Past President

Mrs. A. Delahey, Saskatoon —
President

Mrs. H. Solomos, Regina —
President-Elect

Miss D. Hancock, Saskatoon —
Vice-President

Mrs. J. Durden, Saskatoon —
Secretary

Mrs. G. Farrell, Saskatoon —
Treasurer

The Conference concluded with a New Products Dinner sponsored by the Regina Home Economics Association.

Barbara J. Zalinko
Public Relations Convenor

NATIONAL SANITATION CODE —

Canada's first National Sanitation Code for the food service industry was released in April at the Canadian Restaurant Association Convention.

The preparation of the sanitation code is the result of combined efforts of the Canadian Restaurant Association and municipal and provincial health agencies, and the Health Protection Branch of the Federal Department of Health and Welfare. The C.R.A. provided leadership through the research and development stages and the department assisted in the publication and distribution of the new code.

The code is aimed at ensuring customers the highest level of sanitation in all establishments where food is prepared and/or served.

CIRCLE THESE DATES

July 7 — 12, 1974

C.H.E.A. — Convention,
Vancouver, B.C.

1976

C.H.E.A. Convention, Ottawa,
Ontario

I.F.H.E. Convention, Ottawa, Ont.

1978

C.H.E.A. Convention, Banff,
Alberta.

IMPORTANT

To receive October issue of the C.H.E. Journal, 1973-74 membership fees must be paid by August, 1973.

Refereed Section

Welcome to the Refereed Research Section of the Journal. To launch this project, attention is focused on abstracts of recently completed graduate students' theses and dissertations. In forthcoming issues, depending on space available, one or more abstract will be published with an attempt made to have these representative of all areas of Home Economics and of all universities granting advanced degrees.

DIETARY STUDY OF NON-INSTITUTIONALIZED ELDERLY CITIZENS

Dianne Lynn Reid, M.Sc.

University of Guelph, 1972

PRESENT OCCUPATION: *University of Alberta*

SUPERVISOR: *Dr. J. Elizabeth Miles*

The purpose of this study was to investigate the dietary intakes on a group non-institutionalized elderly Guelph citizens. A questionnaire was administered by interview to 50 subjects ranging in age from 65 to above 85 years. The questionnaire was designed to obtain information on the dietary habits, food procurement practices, subjective feelings of health and sociability, and demographic characteristics of the subjects. Specific scores were devised for selected variables. Relationships were investigated between the subjects' responses and their dietary intakes evaluated for nutritional adequacy from 4-day food records.

Only 10% of the subjects had diets meeting the Canadian Dietary Standard recommendations for calories and eight nutrients. Calories, vitamin A and ascorbic acid were the components least well supplied in the individual diets. Bread and cereals were the major contributors of calories and most nutrients (except vitamins A and C in particular) in the 50 dietaries. The majority of subjects habitually had a 3-meal pattern each day; snacks were regularly consumed by more than one-half of the sample.

Significant correlations were observed between the subjects' income level and the following variables: sociability score, variety score and dietary rating. Those subjects who had higher incomes were assessed as being more socially active, consumed a greater variety of foods and beverages, and had better dietary intakes.

NUTRITION MISCONCEPTIONS OF COLLEGE FRESHMEN

Margaret Ellen McCarthy, M.Sc.

University of Guelph, 1972

PRESENT OCCUPATION: *Ontario Dept. Health, Mental Health Branch,
Picton, Ontario.*

SUPERVISOR: *Dr. J. H. Sabry*

A "Nutrition Information Questionnaire" was developed to measure nutrition misconceptions of freshmen at the University of Guelph. Scores on

the questionnaire were studied in relation to several student characteristics including: sex, rural or urban background, amount of nutrition education, use of a vitamin-mineral supplement and frequency of shopping at a health food store.

Two hundred and seventy-four freshmen responded "true", "false" or "don't know" to 55 false statements and 15 true statements about nutrition. If a student responded "true" to a false statement, or "false" to a true statement, he was said to have a nutrition misconception. Nutrition knowledge was measured by the student's ability to give correct responses for the statements. The questionnaire included seven, 10-item subtests representing seven areas of nutrition knowledge.

Misconceptions existed in all seven areas of knowledge. The mean misconception score on the 70-item questionnaire was 18.62. The mean correct answer score was 37.79. The mean number of "don't know" answers was 13.59.

There were no significant differences in total test misconception or correct answer scores of male and female students. Female students with one or more years of high school Home Economics had fewer misconceptions and more correct answers than female students with no background in high school Home Economics. Female students with a background in high school Home Economics also had more correct answers than male students, none of whom had studied Home Economics. (The differences in mean scores were significant at the 0.01 level of confidence). The number of years of high school Home Economics (from one to four or more) had no significant effect on either correct answer or misconception scores.

The number of years that nutrition was studied in health or biology class was related to higher misconception scores, but bore no relationship to correct answer scores. The students who shopped at health food stores had both more misconceptions and more correct answers than non-shoppers, but the difference in number of misconceptions was greater.

Factors which were not significantly related to test scores included rural or urban background, number of years of 4-H Club, use of a vitamin-mineral supplement, and degree program at university.

Examination of subtest reliability coefficients and subtest inter-correlation structure indicated that the test had more construct validity as a measure of nutrition knowledge than as a measure of nutrition misconceptions.

NUTRITIONAL EVALUATION OF RAPESEED PROTEIN

Sharon L. Oliver

University of Manitoba

PRESENT OCCUPATION: Dietitian, St. Boniface Hospital

SUPERVISOR: Dr. B. McDonald

Two experiments with growing rats and a human metabolic study were conducted to evaluate the nutritional quality of rapeseed protein.

Utilization of a low-thiogluconside-content rapeseed meal (LoRSM) by growing rats was compared with that of a high-thiogluconside-content rapeseed meal (HiRSM) and casein (Cas). Each protein source served as the sole source of dietary nitrogen (2.4%). In Experiment 1, 3 males and 3 females were allotted to each diet. Apparent protein digestibility was lower for the rapeseed meals (80 and 82%) than for casein (94%). However, 4-day nitrogen retention was significantly lower ($P = 0.05$) only for rats fed HiRSM (169, 440 and 526 mg. for HiRSM, LoRSM and Cas resp.). In experiment 2, 48 rats were allotted to the same 3 diets for an 8-week growth study. Weight gains by rats fed Cas or LoRSM was nearly 3 times that of animals fed HiRSM. Thyroid size (mg/g body weight) was similar for the LoRSM and Cas groups whereas a pronounced thyroid enlargement as well as increased size of liver, adrenals, kidneys and testes were observed in rats fed HiRSM. Histochemical examination of hepatic tissue revealed marked changes in activity and localization for acid and alkaline phosphatases and adenosine triphosphatase of animals fed HiRSM but only slight changes in the patterns of rats fed LoRSM. Males fed LoRSM and both sexes fed HiRSM exhibited lipid infiltration in the liver. The results suggest that thiogluconsidcs are responsible for the poor performance reported for animals fed rapeseed meal.

The human metabolic study was undertaken to evaluate the potential of rapeseed flour (RSF) as a protein supplement in an all-vegetable diet for the human. Four subjects were randomly allotted to the RSF diet and 4 subjects to a vitamin-free casein (Cas) diet in a cross-over experiment. Four subjects, two at each period, also were assigned to a wheat gluten (WG) diet. Each protein source, rapeseed flour, casein and wheat gluten was incorporated into baking powder biscuits at a level to provide 20 gm. of protein per day (40% of daily intake) during the two 7-day periods. Four-day metabolic studies showed that apparent protein digestibility was significantly ($P = 0.01$) lower for the RSF diet than the Cas diet (81% and 86%, respectively). However, N retention data showed that all subjects, except one, were either in N equilibrium or positive N balance regardless of diet consumed. Since amino acid analyses revealed each diet to provide adequate quantities of essential amino acids, except methionine and valine, caution must be exercised in interpreting these results.

VITAMIN B6 REQUIREMENT OF YOUNG ADULT WOMEN USING ORAL CONTRACEPTIVES

Therisa K. Holt

University of Alberta

PRESENT OCCUPATION: *Research Dietitian Clinical Investigation Unit,
University of Alberta Hospital.*

SUPERVISOR: *E. Donald*

Five healthy young women who had been taking oral contraceptives of the combined type for a least 6 months and five healthy young women who were not consuming such preparations participated in a study to investigate

the effect of usage of oral contraceptive agents on vitamin B₆ nutriture. A diet of known composition was consumed for 6 days. The 6-day study period was planned to coincide with days 9 to 14 of the menstrual cycle of each subject. On the morning of day 6 of the study a fasting venous blood sample was taken followed by administration of a 2-gm L-tryptophan load dose. Throughout the 6-day study 24-hour urine collections were made and composited so that days 1-4 were pooled, whereas the day 5 and day 6 collections were considered to be the pre-load and post-load samples respectively. The urine was analyzed for tryptophan metabolites: xanthurenic acid, kynurenic acid and N'-methyl-nicotinamide, and for nitrogen.

The levels of the urinary tryptophan metabolites were not significantly different for either the control group or the experimental group when the days 1-4 composite was compared with the day 5 sample; however, following the tryptophan load a significant increase ($P = 0.05$) was noted in both the experimental and control groups for all tryptophan metabolites measured.

Comparison of the control group with the experimental group showed no significant difference in xanthurenic acid excretion for the composite made for days 1-4 whereas the experimental group excreted significantly greater ($P = 0.05$) amounts of xanthurenic acid on day 5 and day 6 than did the control group. Kynurenic acid excretion was significantly increased ($P = 0.05$) in the control group compared with the experimental group for the days 1-4 composite, however, there was no significant difference between experimental and control groups on day 5 and day 6. The excretion of N'-methyl-nicotinamide for the days 1-4 composite or day 5 was not significantly different for the experimental group compared to the control group, but a significantly greater ($P = 0.05$) excretion by the experimental group when compared to the control group occurred on day 6.

No significant differences in nitrogen excretion were noted either when pre-load and post-load values were compared or when the control group was compared with the experimental group thus indicating that the decreased levels of plasma amino acids in oral contraceptive users is not a result of urinary loss.

These results may indicate an increased requirement for vitamin B₆ in those taking oral contraceptives.

CONSUMER ACCEPTANCE AND SENSORY PANEL EVALUATION OF THE EATING QUALITY OF BEEF AS AFFECTED BY CROSSBREED AND SEX

Catherine McLandress

University of Manitoba

SUPERVISOR: *Prof. R. Diamant*

PRESENT OCCUPATION: *Dietitian, University of Missouri Medical Center
Columbia, Missouri*

Sensory panel evaluation, objective measurements and consumer panels were used to evaluate meat from bulls and steers representing the six cross-

breeds of Limousin and Simmental sires with Angus, Hereford and Beef Shorthorn cows. The test muscles, longissimus dorsi and biceps femoris, were taken from a total of 60 animals.

The effect of the crossbreed and sex on the quality of the meat varied with the muscle and the type of measurement. For the purpose of analysis and discussion, the crossbreeds and sex were separated into their component effects, being the effects attributable to sex, cows, sires, cow x sex, cow x sire, sire x sex and cow x sire x sex. The sex effect analyses showed that steers exhibited less cooking loss, greater texturometer juiciness, and less hardness and cohesiveness than bulls. Steers required less shear force than bulls for the medial core position of the longissimus dorsi muscle, while bulls required less shear force than steers for the proximal core position of the biceps femoris muscle. Sensory panel evaluation rated steers higher in juiciness, greasiness and meatiness, and lower in chewiness and fibrousness than bulls. Shear force, texturometer juiciness and the sensory panel evaluation of hardness, juiciness and fibrousness demonstrated significant effects attributable to the cows. No significant effects attributable to the sires were found. Several effects attributable to the two-term interactions were significant.

The consumer panel was unable to detect differences among the six crossbreeds or between the two sexes. According to the sensory panel evaluation, no one crossbreed or sex was outstandingly different from the others. No differences were great enough to affect overall consumer acceptability.

AN INVESTIGATION OF THE EFFECTS OF CHLORINE TREATMENT ON THE CAKE BAKING PROPERTIES OF TRITICALE FLOUR

Beverley N. Thompson

University of Manitoba

PRESENT OCCUPATION: *Research Technician, Canadian International Grains Institute*

SUPERVISOR: *Prof. M. Vaisey*

Pertinent physical and chemical properties of Triticale flour, treated with chlorine gas at five levels, 0.2, 0.3, 0.4, 0.5 and 0.6 ml/g flour, were measured and compared to unchlorinated Triticale flour. With increasing chlorine treatment, a drop in flour pH occurred, and the alpha-amylase activity was reduced slightly as measured viscometrically and in the amylograph. A marked increase in flour gel firmness, measured on the Texturometer was evident with increasing chlorine treatment. Absorbance of the pigments extracted from the flour indicated chlorine exerted a bleaching action on the flour which was supported by a sensory panel's ranking of cake crumb color.

The performance of chlorinated and unchlorinated Triticale flour in a lean-formula cake made at four water levels was assessed by measurements of cake volume and crumb characteristics. Cakes made from chlorine treated

flour were superior to those made from untreated flour in volume, subjective crumb score and in objective Texturometer evaluations of hardness, cohesiveness, gumminess and adhesiveness of the cake crumb. Increasing levels of chlorine, 0.2 to 0.6 ml/g flour, effected significant linear improvements in the subjective crumb score and in the Texturometer measurements of cohesiveness and adhesiveness over all water levels. In all parameters of cake quality measured, increasing liquid levels in the cake batter caused a marked reduction in cake quality; although in the subjective crumb score, and in Texturometer measurements of crumb firmness, gumminess and adhesiveness the reduction in quality was moderated by chlorine treatment of the flour.

Improvements in cake texture due to chlorine were minimized at the lowest water level used, however a six-member sensory panel ranked cakes made from unchlorinated flour as gummier than cakes made from chlorine-treated flour and increasing chlorine tended to reduce crumb gumminess.

THE MARRIAGE ENCOUNTER AND MARITAL COMMUNICATION

M. G. Leonne Valois

University of Manitoba

PRESENT OCCUPATION: *Ph.D. Candidate in Councelling, University of Kansas*

SUPERVISOR: *Dr. L. Jackson*

In order to investigate the effectiveness of the Marriage Encounter as a means of increasing marital communication, the Marital Communication Inventory (Bienvenu, 1969) was administered to forty couples before and after participation in a Marital Encounter. A control group, matched on the basis of age, length of marriage, social status, and number of children, also completed the test, with the same time interval between the tests.

For both the experimental and control group, and on the pretest and posttest, husbands and wives perceived their marital communication significantly similarly ($p .01$, $r = .61-.69$). There were, however, no significant differences between the experimental and control group in the amount of change in communication scores from the pretest to the posttest. In viewing these data, it is important to consider the fact that the experimental and control group obtained significantly difference scores on both tests.

AN INVESTIGATION OF THE OWNERSHIP OF SPECIFIED ELECTRICAL HOUSEHOLD GOODS BY SOCIAL CLASS AND RELATED VALUES

Kathryn Frances Laverty

University of Manitoba

PRESENT OCCUPATION: *Family Life Specialist, Province of Alberta*

SUPERVISOR: *Dr. N. Barclay*

Metropolitan Winnipeg homemakers were surveyed by means of a mailed questionnaire in order to investigate the ownership of sixty-three specified electrical household goods by social class, value associations, and other personal and situational variables.

The primary purpose of the survey was to discover if there was a set of goods, a "standard package," common to the majority of households regardless of social class. It was hypothesized that there would be no significant differences in the ownership of goods within and between classes; that social classes would not differ in their proportionate usage of specified values or in their value associations for individual items in the standard package; and that there would be no significant differences in the rate of ownership of goods by family life cycle stage, number of years married, employment of the homemaker, type of residence, and the number of people in the home.

Analysis of the data from two hundred returned questionnaires revealed a set of seventeen items owned by 75 percent or more of the total sample and a very similar set of seventeen items owned by 75 per cent or more of the middle class. Statistical significance was indicated in the difference between the rate of ownership and non-ownership of most items within each social class but there was no significance between the classes in their ownership rates for most items. Significant differences were also found for some of the values when examining their proportionate usage by the social classes. In general, there was little difference by social class in the value associations made for each of the items in the standard package. Considering the ownership of goods with respect to the other variables studied, it was found that each variable was significant in the ownership of two or more electrical household goods.

From the findings of this research it was concluded that there was a set of goods common to the majority of households regardless of social class differences and this set comprised the standard package of electrical household goods for the sample. It was concluded that within each social class there was a conformity in the ownership or non-ownership of items and that between classes there was a uniformity in the ownership of goods indicating a status leveling with respect to consumer purchases of this type of goods. Regarding values, it was concluded that social classes differ in their consideration of what is important to them and in the way they perceive certain items as exemplifying those values. Of all the variables studied, family life cycle stage was significant in the ownership of the greatest number of items and it was concluded that this variable was of primary importance in the purchasing patterns for electrical household goods.

THE ATTITUDES OF GOVERNMENT AND INDUSTRY TOWARD THE CONSUMERS' ASSOCIATION OF CANADA

Connie Nakatsu

University of Guelph

SUPERVISOR: Professor Dr. R. E. Vosburgh

The purpose of this study was to examine the attitudes of officials in government and industry toward the Consumers' Association of Canada. The source credibility as perceived by these officials was also studied. The individuals from various levels of government and industry were segmented

into the following groups: junior industry and senior industry, junior and senior officials in the federal government and junior and senior officials in the Ontario provincial government. The sample size was forty-six.

A questionnaire consisting of three sections was developed. The first section was created by utilizing the Thurstone judgemental procedure to develop an attitude scale. The second segment was made up of questions regarding the source credibility, the expertise, the prestige and the trustworthiness of the four groups: the Consumers' Association of Canada, the Better Business Bureau, the Canadian Manufacturers' Association, and the Association for Consumer Research. The third part consisted of questions dealing with membership in the four above mentioned groups, associations the respondents had had with the groups and his own position within his own group.

After the data had been collected, t-test analyses comparing the attitude scores of the officials in government and industry grouped at various levels were performed on the data.

Twelve null hypotheses were tested. It was concluded that no differences in the attitudes exist between junior officials in industry and senior officials in the federal government, junior officials in industry and their counterparts in both federal and provincial civil service and junior officials in industry and senior Ontario provincial civil service.

On the other hand, there was a significant difference between the attitudes of senior officials in industry and junior and senior levels of both the federal and the Ontario provincial civil services. This also held true in the case of perceived source credibility.

Within the various groups of respondents, there was no significant differences between the four government groups. But, there was a significant difference between the attitudes of junior and senior officials in industry.

Of the three groups, (the Canadian Manufacturers' Association, the Better Business Bureau, and the Consumers' Association of Canada), the Consumers' Association was rated as the least credible, expert and prestigious but the most trustworthy.

CLOTHING CONSUMPTION PRACTICES OF LOW INCOME CHILDREN

Constance Anne Jeffreys

University of Manitoba

PRESENT OCCUPATION: *University of Guelph, Instructor*

SUPERVISOR: *Prof. C. Fye*

The major concerns of this study were to examine clothing inventories, clothing acquisitions and total clothing expenditures of eighty children, 38 girls, 42 boys between the ages of 6 and 14 whose mothers receive mothers' allowance; to compare the average amounts mothers spend to clothe their children with the amount they receive as a clothing budget from social assistance; and to compare the amounts actually spent by the mothers with the amounts recommended as adequate by an American low income clothing

standard study. The relationships between the total clothing expenditures and the age and sex of the children, number of children in the family, age and education of the mother, family income and length of time on mothers' allowance were examined through the use of multiple regression analysis.

It was found that the social assistance budget for clothing met the clothing inventory cost of 31 per cent of the boys and 42 percent of the girls. The American low income standard would meet the clothing inventory cost of 47 percent of the boys and 70 per cent of the girls.

A significant relationship was shown to exist between the education of the mother and total clothing expenditures for the boys. The education of the mother and the length of time on mothers' allowance were both shown to be significantly related to the total clothing expenditures for the girls. An increase of \$16.37 was spent on the boys total clothing expenditure for every year's increase in his mother's education. Increases of \$18.16 and \$10.31 were spent on girls total clothing expenditure per year's increase in the mothers' education and in the length of time on mothers' allowance respectively.

CAREER APPAREL AND ITS RELATIONSHIP TO SELECTED PERSONALITY AND BIOGRAPHICAL CHARACTERISTICS OF BANK EMPLOYEES

Marilyn Rae Macdonald

University of Manitoba

PRESENT OCCUPATION: *Travelling in Europe*

SUPERVISOR: *Prof. C. Fye*

One hundred and four female employees of Winnipeg branches of the Bank of Nova Scotia were classified into one of three career apparel groupings on the basis of how frequently they reported wearing non-compulsory career apparel, group A if they did not wear career apparel at all, group B if they wore it one to three days a week, and group C if they wore it four or five days a week.

No significant differences existed between the three career apparel groupings in the personality characteristics of security-insecurity, as measured by Maslow's 5-1 Inventory, or in need satisfaction and need importance, as measured by the modified Porter Need Satisfaction Questionnaire. However, whether or not employees wore career apparel appeared to be a more important factor than how often they wore it. A comparison of two groupings revealed that those employees who did not wear career apparel, (group A, N=54), were significantly more secure psychologically and less satisfied with the security aspects of their jobs than those employees who wore career apparel at the time of this study (group BC, N=50).

Employees' biographical characteristics and attitudes toward career apparel were obtained from responses to a personal data questionnaire. Significant relationships were found between the frequency employees wore

career apparel and three biographical characteristics: (1) level of education, (2) position in the bank, and (3) number of years employed by the bank. Although employees and branch managers recommended that certain improvements be made in the particular career apparel outfits worn in their bank, their general attitudes toward career apparel were positive.

THE AUTOMATIC CONTROL OF THE DRYING OF TEXTILE FABRICS

Rita M. Crow, Ph.D.

University of Guelph

PRESENT OCCUPATION: *University of Saskatchewan*

SUPERVISOR: *Prof. K. Slater*

This study shows that, during the dynamic drying of fabrics, a special relationship exists between the amount of moisture in the air, as measured by the dewpoint temperature or the wet bulb temperature at a given air temperature, and the absorption percent regain for a wide range of fibers, as determined when in equilibrium with standard static air conditions of 21°C and 65% relative humidity.

Laboratory results show that a contact fabric temperature measuring device, in particular a thermistor, does not act as a wet bulb thermometer during the constant rate period of the drying cycle due to the incomplete wetting of the thermistor element by the fabric. The cloth temperature, measured by a thermistor during the falling rate period, is a function of the immediate atmospheric wet bulb temperature.

It is found that the time-temperature drying curve, recorded by a thermistor, varies from trial to trial for a fabric, this variation primarily being introduced between the observed critical moisture content and the latter part of the falling rate period, and the choice of a standard datum zero in time on these drying curves is not applicable to all fabrics.

Thermistor cloth temperature measurements of a drying fabric are unaffected by the presence of a wet finish, but resistance and capacitance type moisture measurements may vary with the particular unfinished fabric and can be altered considerably by the presence of a wet finish applied to the same fabric during the drying of the fabric.

A STUDY OF SOME FACTORS AFFECTING THE PHOTODEGRADATION OF NYLON AND POLYESTER YARNS

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University of Guelph

PRESENT OCCUPATION: *Dept. Consumer and Corporate Affairs, Ottawa*

SUPERVISOR: *Prof. G. C. Frank*

The effect of relative humidity, anatase titanium dioxide content, and light inhibitor on the photodegradation of nylon and polyester yarns has been studied.

Yarn samples have been exposed in the Xenon arc Weather-Ometer to radiation filtered by a pyrex/clearglass system, at 20, 50, and 80% R.H., and to sunlight behind single strength window glass at approximately 20% R.H. Analysis of loss of tensile properties has shown that a high relative humidity level has significantly accelerated the photodegradation of both nylon and polyester in the Weather-Ometer. The low relative humidity measured in the outdoor cabinets has indicated that acceleration of breakdown by relative humidity does not contribute to the poor correlation found between Xenon arc and outdoor exposures. Titanium dioxide has significantly sensitized degradation of both nylon and polyester yarns exposed to filtered sunlight. This effect was much less apparent in the Weather-Ometer. The protective effect of the light inhibitor added to several nylon yarns was more apparent during outdoor exposure than during Xenon arc irradiation.

A detailed study of the relative spectral distribution of sun-sky radiation at several times of day under several sky conditions was made.

Radiation from a sunny-bright sky over the noon period gave a representative average, and would be a reasonable standard spectral distribution for comparison with artificial light sources. Comparison of the sun-sky spectral distribution with the Xenon arc emission spectrum indicated that although agreement of the lower cut-off wavelength could be attained using Q/Q/WG filters, Xenon radiation was deficient above 3150A° regardless of the filter system used. It was concluded that the Xenon arc would require modification to be considered a reliable light source for the prediction of weathering of complex polymer systems by sunlight.

GRACE GORDON HOOD

Grace Gordon Hood died in Indianapolis on December 4, 1972. Dr. Hood was a life member of the C.H.E.A. and the A.H.E.A. She received her bachelor's degree from Columbia University, her master's degree from the University of Chicago and her doctorate from the University of Minnesota. Dr. Hood was at the University of Manitoba as head of the Home Economics department for seventeen years, retiring in 1952. She received an honorary LLD. from the University of Manitoba.

Reviews

The following book reviews are from the Resources Section of the Newsletter, a publication of the Home Economics Section of the Ontario Educational Association, edited by Isabelle Morrison. The objective of this section of the Newsletter is to provide brief descriptions of teaching texts and materials useful to Home Economics teachers. Although the selections do show some personal preference, each item has been reviewed with current educational theory and trends in mind. In this November, 1972 issue a start is made on some of the basic texts in each area. In the Child and Family Studies Section these happen to be books of readings which, though not a substitute for a good text, do put within reach of the reader a variety of thought and theory. The focus in the Management and Consumer Economics section this time is on consumer education.

Phyllis Meiklejohn
Resource Editor OEA Newsletter
Special Lecturer Faculty of Education
University of Toronto

SECTIONS

1. Child and Family Studies
2. Foods and Nutrition
3. Housing and Interior Design
4. Management & Consumer Economics
5. Textiles and Clothing
6. Values
7. General References

CODE

- | | |
|----|---------------------|
| + | Intermediate Grades |
| ++ | Senior Grades |
| H | Hardcover Book |
| P | Paperback |
| S | Student |
| T | Teacher |

CHILD AND FAMILY STUDIES

Cavan, Ruth Shonle, Editor. *Marriage and Family in the Modern world*. 3rd Edition. New York: Thomas Y. Crowell Co., 1969. 636 pp. \$5.95 (++) (P) (S) (T)

A wide range of thought and disciplines is represented in this book of readings aimed at increased understanding of marriage and family life. There are 64 selections organized into 20 chapters. The readings, some quite complex, have been carefully selected to allow for exploration of many approaches and viewpoints. Although there is a decided U.S. orientation to the collection, a fair number of other cultures are represented. Each selection is prefaced by a brief editorial comment, which is not always as enlightening as one might hope for. There is a wide range of focus, from the significance of marriage and family today to fore-stalling and solving family problems. The chapter on differences between men and women seems strangely dated with the changes that have taken place in this area since 1969. This college level text has appeal to both teacher and the senior student of the family.

Goode, William J., Editor. *Readings on the Family and Society*. Englewood Cliffs, New York Jersey: Prentice Hall Inc., 1964. 242 pp. \$5.25 (+) (+ +) (P) (T)

A book of readings for the serious scholar which includes some classical studies as well as many challenging opinions in the field of family sociology. This text focuses less on the internal relationships of the family and more on the family as one element in the larger social structure, shaping it and being shaped by it, simultaneously. Emphasis is placed in the 36 selections on cross-cultural and historical material. The readings complement Goode's text, "The Family". An excellent reference.

Hughes, Helen MacGill, Editor. *Life in Families*. Boston: Allyn & Bason, 1970. 243 pp. \$1.76. (+ +) (P) (S)

A volume of readings for the high school student, adapted from the theory and research of 20 leading authorities in the field of sociology. It provides an overview of family life as seen from the sociological perspective, describing the family under various conditions of race, class and culture. Readings are generally organized around the normal life cycle and regard the family as the basic scene for human interaction. A number of the readings are based on what are considered to be classics in the field of sociological research. A clear and fluid writing style is used. This book could well enthuse the reader to seek out the original study for more detailed analysis. A most interesting and fairly extensive annotated bibliography is provided to supplement the readings in the book. It lists relevant novels, plays, poems, biography, as well as scholarly works. This book is a tremendous addition to the library of a student of the family.

Ishwaran, K., Editor. *The Canadian Family*. Toronto: Holt Rinehart & Winston of Canada Ltd., 1971. 557 pp. \$8.50 (+) (+ +) (S) (T)

A Scholarly book of readings on the Canadian family, made up of 30 papers, most of which are original research reports especially prepared for this volume. With only five exceptions, these papers are written by individuals involved in Canadian family studies. The readings are divided into 9 sections covering such diverse topics as: family patterns, family and community, contemporary family problems. This broad range is given competent treatment in a writing style which varies with each contribution but is generally most readable. Ishwaran provides an excellent overview of problems and challenges in the study of the Canadian family. There is a tremendously helpful bibliography. This text makes a welcome and needed contribution to the expanding knowledge of the uniqueness of and similarities in the families of Canada.

Skolnick, Arlene S., and Jerome H. Skolnick. *Family in Transition*. Boston: Little, Brown & Co., 1971. 542 pp. \$5.95 (+ +) (P) (S) (T)

A diverse book of readings which should meet demands for an examination of alternate life styles. This text pulls from recognized authoritative texts, professional journals and many popular periodicals. A stimulating and quite lengthy introductory essay on "Rethinking the Family" challenges many conventional views and basic assumptions and critically appraises a number of family studies. This is not an anti-family book but poses pertinent questions on a number of popularly held opinions. Organization falls into four parts: conceptions of the family; politics of sex and marriage; politics of child rearing; and politics of household and life style. Each part has an introduction which provides a perspective to the 50 readings included. The deviant life styles covered may cause discomfort to the more conservative reader. This book is a valuable addition to resources on the family.

FOODS AND NUTRITION

Cote, Patricia. *People, Food, and Science*. Boston: Ginn and Co., 1968. 552 pp., \$8.40 (+ +) (H) (S)

An exciting advanced foods text with a most relevant approach. It focuses on the development of greater understanding of the main concepts relating to man's need for food and his efforts to satisfy this need. The book is divided into three major sections: the significance of food, the nature of food, and the management of food resources. A major objective of the text, the student manual and the teacher's guide is to stimulate interest, curiosity and critical thinking. The first part of the book deals with the role food plays in an historical, cross-cultural and current international framework and uses maps effectively; the second part deals with the scientific principles involved in foods; the last part applies the concepts already covered to the problems of food purchasing, storage and preparation. This last section emphasizes meal management and international foods. Bibliographies are interesting. Varied opportunities for individual study and group activity arise out of the separate student manual which contains suggestion for flexible learning experiences and outlines of scientific experiments. This text and the accompanying manuals provide a challenging teaching/learning opportunity stressing the conceptual approach.

Hughes, Osee, Miriam Bennion. *Introductory Foods*. 5th edition. Toronto: Collier-Macmillan., 1970, 545 pp. \$10.00 (+ +) (H) (S) (T)

An elementary college foods text written in an easily read style suited to the senior high school student of foods who may not have had prior courses. In the 18 chapters, basic traditional food concepts, thoroughly considered are combined with new food developments in a scholarly way, making this a useful teacher reference as well. The format is attractive, the photographs beautiful, and these frequent illustrations and tables aid in understanding the principles under consideration.

McDermott, Irene E., Mabel B. Trilling, Florence W. Nicholas and Phyllis J. Meiklejohn. *Food for Modern Living*. Toronto:

McClelland & Stewart & Lippincott, 1968. 588 pp. \$8.45 (+)
(H) (S)

A comprehensive beginning foods text using a traditional approach while exploring some of the newer concepts such as food production, processing, and marketing. The main aim of the book is to increase the reader's knowledge, understanding and skills in the foods and nutrition areas. There are 12 units and 22 chapters covering the usual emphases. Wherever possible, when differences exist between the United States and Canada, the Canadian counterpart has been used in this edition. At the end of each chapter, questions, activities and reading lists concerning new understandings are given. A large number of photographs are used. There is a teacher's manual available outlining classroom activities and teaching aids.

McWilliams, Margaret, and Linda Davis. *Food For You*.
Boston: Ginn & Co., 1971. \$3.40 (+) (P) (S)

A type of programmed instruction with questions occurring at the end of each paragraph, answers alongside the questions on outside margin, and study guides at the end of each chapter. This book underlines successfully the relationship between good nutrition and overall well-being of the individual. The book is abundantly illustrated with well chosen graphs, charts, photographs and sketches. A text of this nature has a role to play in any classroom where an individualized approach to instruction is emphasized. It could be an aid to a student who has missed classes. The basic four food plan is used throughout. One chapter is a food tour of American tastes.

Medved, Eda. *The World of Food*. Boston: Ginn & Co., 1970.
538 pp. \$7.80 (+) (H) (S)

A beginning food text which has as its central purpose a broadened understanding and appreciation of food and its many facets. The book is divided into six sections and the chapters within each section are autonomous providing flexibility in the teaching situation. Wherever applicable, developments in convenience food products have been integrated. Each chapter is introduced with the same delightful cartoon character and with definitions of the new terms to be discussed. At the end of each chapter appear main ideas, questions and activities stressing application of chapter principles. The line drawing illustrations of the tools and techniques of cookery are excellent. A teacher's guide is available. A traditional approach to the study of foods.

More to follow in October Journal.

by *MARJORIE ELWOOD*

Abandons Annual Model Change

G.S.W. markets Moffat and McClary branded kitchen, laundry and G.S.W. air-conditioner products. It is the only large Canadian owned company marketing a full line of home appliances.

In March of 1971, G.S.W. began one of the most comprehensive consumer research programmes ever undertaken by a Canadian home appliance producer. Over a period of 15 months, English and French speaking Canadians right across Canada were interviewed by G.S.W. research teams. This was because the company, and especially John C. Fennie, the Director of Marketing, believed that "consumers should have as much to say about the design of our products as our engineering group". He also added that "in the interest of consumers and the appliance industry we will only make changes in response to technological improvements and consumer desires".

G.S.W. has made significant improvements in the literature accompanying all their products. Also, to assist users of all Moffat automatic washers and dryers they have placed a Fabric Chart on the control panel background. For additional convenience, Moffat and McClary washers now have bleach and fabric softener dispensers.

In response to the consumers' desire to have home appliances as an integral part of their home decor scheme, Moffat and McClary kitchen products have either a soft-feel leather or wood grain finish in handles, control knobs and backguards.

Other improvements include a large sized oven window, cantilever shelves, a juice can dispenser and larger crispers, as well as a fast freeze compartment. Of course, the Moffat and McClary ranges include those with electric self-cleaning and continuous clean ovens. Recent innovative products to the Moffat Line are Canada's first smooth surface range and a countertop Microwave oven series. These all merit close investigation.

Frozen Raspberry Shortcake

McCain Foods Limited of Florenceville, New Brunswick, recently introduced a new two-pound Raspberry Shortcake for both the retail and food service markets. The case pack available nationally consists of 6 two-pound cakes.

They are golden cakes made with pure shortening to keep them soft and moist, and have a raspberry puree filling. Attractively garnished with coconut on a rosette patterned whipped topping, these frozen ready-to-serve desserts are packaged in crimped foil pans with a see-through plastic dome for product protection. They thaw in about two hours, need no heating or baking and cut readily into eight generous servings.

Health Food Advocates

"Contrary to claims by health food advocates, it has been proven that it is the chemical element not the method of fertilizing plants — be it organic or inorganic — that counts." So said Dr. Matt John, a specialist in soil fertility at the Agriculture Research Station in Agassiz, B.C. He further stated that organic gardening does not produce more nutritious food.

A Remarkable Kind of Water

Food is largely water, but in the case of fruits and vegetables water is all but a small percentage of the edible portion. For example, raw cauliflower is 91% water; carrot 88.2%; cabbage 92.4%; so-called "dry" onions 89.1%. Yet the water in fruits and vegetables carries in solution 94.5% of the vitamin C supply from food; 49.2% of the vitamin A; 42% of the folic acid; 29.9% of the vitamin B₆; 19.9% of the iron; 25.7% of the magnesium; 18.8% of the thiamin; 16.7% of the niacin; and a large part of the trace minerals of all kinds, plus vitamin K.

It's a remarkable kind of water. Not only does it carry a wide spectrum of nutrients, but this water is germ free. The selection and filtration ability of plants is such that the water in the cells is virtually uncontaminated. It is better than distilled water because the distilled product carries no vitamins or minerals, while the liquid in all fruits and vegetables makes a contribution to nutrition, and in some cases a large contribution.

How to Eat a Mango

Mangoes require little preparation. Serve this luscious fruit whole, with the skin slashed for peeling as it is eaten. This preserves the spicy aroma that makes mangoes one of the most delicious tropical fruits. Select mangoes that are plump, fresh-looking and firm to the touch.

Crunch a Radix

The Latin name for the radish is "radix", meaning "root". Supermarkets offer a selection of this crisp vegetable, which sometimes ranges from all-red to white and in both varieties globular and tapered. All have the tangy flavor and crunchy goodness that adds zest to salads and character to sandwiches. Radishes have a good amount of Vitamin C and iron. They're low in calories, which makes them good for weight-conscious eaters.

Not by Nutrients Alone

Man does not live by pure nutrients alone. He needs non-nutrients, including cellulose, lignin and pectic substances, generally thought of as "fiber" or "roughage". For good digestion, nutrients need to be associated with some bulk. Judging by the scores of millions of dollars invested every year in advertising of laxatives, some people have quite a problem with digestion and

elimination. Yet humans have the necessary apparatus to complete digestion without aid from drugs as proved through a good many thousands of years of history and the fact that most of the earth's 3 billion people probably have never even seen a drugstore.

Roughage for bulk is supplied by fruits and vegetables and whole grain cereals. Milk in fresh form also increases intestinal residues. Raw fruit and vegetable salads in particular are a good source of fiber as well as vitamins and minerals, particularly Vitamin C, Vitamin A, iron and trace minerals. Some people cannot tolerate much fiber and may need to rely on cooked fruits and vegetables, and may not be able to tolerate rough breads and cereals. But most people find fiber a desirable part of food and it should be consumed unless a physician determines otherwise.

Milk Quality

A year ago the Borden Company Limited developed an opaque plastic film for packaging milk and asked that it be tested with other milk containers for light transmittance, light-induced off flavour and vitamin retention.

A panel of 20 University of Guelph scientists trained to recognize light induced off flavour in milk, found that milk in the opaque Borden pouch retained its original good flavour even after the 24-hour test period. Milk in cartons developed oxidized or light-induced flavour after 12 hours and that in clear pouches and jugs developed significant off flavour after only three hours exposure. These tests were done under cool fluorescent light of 200 foot candle intensity in a cabinet refrigerated to 38 to 40 degrees.

As far as vitamin loss was concerned, the milk in the opaque pouches after 6 hours exposure showed a loss of only 1.2 per cent of riboflavin and 47.2 per cent of vitamin C. Jug milk showed a loss of 4.3 per cent of riboflavin and 35.5 per cent of vitamin C and the cardboard carton milk lost 5.6 per cent and 10.6 per cent respectively. So based on independent findings, it would seem that Borden's "Lightguard Packaging" means greatly increased protection for milk's high quality and freshness.

The Chopping Board

In response to the rumblings against wooden chopping boards, I.P.L. (Les Industries Provinciales Ltée.) now have on the market their plastic chopping board. It is an all purpose, light weight, 9" x 11" solid board that is warp-proof. It can be easily cleaned with a regular detergent and will even withstand the heat of a dishwasher. I have found in using it that it does not dull knives used for chopping and slicing meats, fruits and vegetables. It is claimed to be impervious to bacteria development, is odorless and non-toxic. It makes an attractive, practical piece of equipment for the kitchen and an asset for any one involved in food demonstrations. Most hardware stores and departments stock this "Lady Provincial" chopping board — the suggested retail price is about \$6.00.

Litton-Moffat Microwave Ovens

Designed for home and cottage use the Litton-Moffat Microwave Oven operates off standard 115 volt 15 amp circuits so all you have to do is plug it into a regular wall socket. There are two models — the Standard and the Deluxe. Both have oven space that accommodates all standard size baking dishes; an intrusion-proof/see through door (only when it is securely closed will the oven operate); shielding of the cooking tube to prevent burn out if a spoon is accidentally left in the oven; end of cooking cycle buzzer and an easy-to-clean acrylic interior. The Deluxe model also has a separate control for the automatic defrost cycle and a Micro Browner. This speedy unit does bake, poach, simmer, roast and reheat in about one quarter the time it takes in a regular oven. It cannot bake a souffle or roast a 30 lb turkey but how often does one cook such things? It has been said that with a microwave oven and an electric frying pan no other cooking unit is needed. However, keep your regular range temporarily and invest in a microwave oven as a very efficient supplementary cooking unit, if your family is small, your available time spent in the kitchen limited, and the members of your family eat at irregular times. Soon you will find you are doing almost all your meal preparation in the Litton-Moffat microwave oven.

In answer to Consumers Union article concerning this type of oven (these detrimental assertions have since been withdrawn), here are some facts clarifying the misunderstandings created by C.U.:

1. With over 700,000 units in continual use, *there has never been an injury* from radiation emissions from a microwave oven.
2. There is no danger of short term or long term effects of low level microwave oven emissions.
3. The Federal Government (HEW) has stated that microwave ovens are "absolutely safe" and that it has "no reservations whatsoever about the safety of microwave ovens".
4. Consumer's Union presents *no new facts* concerning microwave oven safety.
5. All 15 ovens tested by Consumer's Union met the Federal standard, without exception.
6. Microwave ovens are the safest appliance in the kitchen.

For further information concerning Litton-Moffat microwave ovens and the operation of microwave ovens in general write to Alan Surpin, Communications-Plus, 46 Albertus Ave., Toronto; (416) 488-2986.

Smooth Surface Range

The Moffat Epicure 2000 cooking centre is the first of a new breed of home appliances to be introduced to Canadians by G.S.W. Appliances. It uses no coils, burners or drip pans. Instead it incorporates in its surface the Cooktop, by Corning — a smooth, strong sheet of Pyroceram® glass-ceramic material. Other features of the Epicure 2000 are automatic clock and minute

minder for the oven and appliance outlet, variable broil control for rotisserie cooking, roastmeter oven window, indicator lights for surface and oven control, infinite heat control knobs and a storage drawer. Available in White, Avocado and Harvest Gold.

Elemental Diet Product

Mead Johnson Canada has introduced Flexical, the first elemental diet product available nationally according to James Doherty, president. He stated that its introduction parallels that of pabulum in that the concept of an elemental diet originated in Canada. Flexical's current availability results from the developmental work and clinical evaluations carried out by Mead Johnson in Canada since 1968.

Elemental diet products are valuable for patients with digestive and absorption problems and/or when low residue is desired. They are especially adapted to various types of intestinal afflictions and as an adjunct to or in transition from intravenous hyperalimentation. Flexical, available in 4 flavours, has all the advantages of a normal, balanced diet — 61% of available calories are derived from carbohydrate, 30% from fat and 9% from protein hydrolysate (amino acids).

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FRANCES McKAY
President C.H.E.A.
1943 - 1945

The death occurred in Ottawa of Miss Frances McKay on February 23, 1973. Miss McKay was born in Kildonan, Manitoba, a descendant of the Selkirk settlers. She received her early education there, her university training at the University of Manitoba, and did post-graduate work at Cornell.

Following graduation, Miss McKay taught Home Economics in Manitoba schools, including the Manitoba School for the Deaf. In 1935 she entered the Extension Service of the Manitoba Department of Agriculture as food specialist and, in 1940, was appointed Director of Women's Work. She continued in this post until 1960.

During this period she was granted a six-month leave of absence to take advantage of a Swift's Fellowship in Applied Nutrition. From 1945-47 she served as a member of the Manitoba Royal Commission on Adult Education. In 1947 she represented the Manitoba Women's Institutes at the Fifth Conference of the Associated Country Women of the World, in Amsterdam.

In September 1960, Miss McKay was appointed Adult Education Specialist, Department of Northern Affairs, with headquarters in Ottawa. She was responsible for the development of a housing education programme for the Eskimos and Indian people of the North West Territories. In 1970 she moved into the Indian Education Program and was active in adult education of Indians in the whole of Canada. Miss McKay retired in July 1972.

Frances was a charter member and a life member of the Canadian Home Economics Association and served as President from 1943-45. From 1960-62 she was a member of the C.H.E.A. Finance Committee which was responsible for establishing, in 1962, the first Canadian Home Economics Association Scholarship.

Miss McKay was also a member of the following: the Manitoba Home Economics Association; Manitoba Women's Institutes (life member); Professional Institute of the Public Service of Canada; University Women's Club. She was Vice-President of the Manitoba Provincial Council of Women from 1949-53 and President in 1953. While in Winnipeg, she served as President of the Winnipeg Zonta Club.



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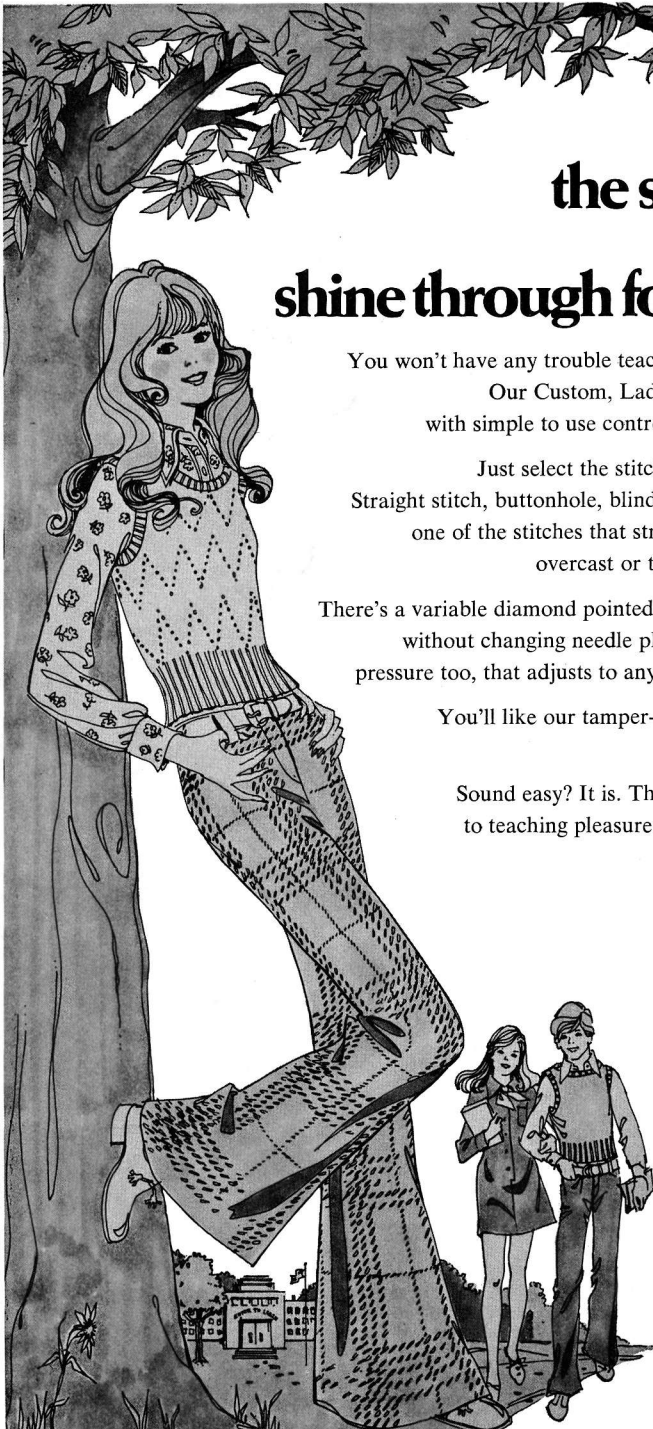
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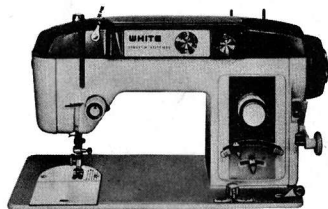
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